

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. Please amend claim 15 and add new claim 70, as follows:

Claims 1-14. (Cancelled).

15. (Currently Amended) A pigment composition comprising:

(a) a precipitated calcium carbonate comprising ~~particle shapes chosen from predominantly aragonitic, predominantly rhombohedral, and mixtures thereof a mixture of aragonitic particle shapes and rhombohedral particle shapes in a weight ratio ranging from 40:60 to 60:40 aragonitic:rhombohedral~~, and

(b) a kaolin clay with a shape factor greater than 25 and a steepness greater than or equal to about 20.

16. (Previously Presented) The composition of Claim 15, wherein the precipitated calcium carbonate comprises a predominantly rhombohedral precipitated calcium carbonate.

17. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a d_{50} of less than about 0.8 microns.

18. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a d_{50} of less than about 0.7 microns.

19. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a d_{50} of at least about 0.2 microns.

20. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a d_{50} ranging from about 0.25 microns to about 0.45 microns.

21. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a d_{50} ranging from about 0.4 microns to about 0.6 microns.

22. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a particle size distribution such that at least about 93% by weight of the particles have an equivalent spherical diameter less than 2 microns.

23. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a particle size distribution such that at least about 86% by weight of the particles have an equivalent spherical diameter less than 1 micron.

24. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a particle size distribution such that at least about 22% by weight of the particles have an equivalent spherical diameter less than 0.5 microns.

25. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a particle size distribution ranging from 5% to 25% by weight of the particles have an equivalent spherical diameter less than 0.25 microns.

26. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a GE brightness of at least 90.

27. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a GE brightness of at least 92.

28. (Previously Presented) The composition of Claim 16, wherein the kaolin clay has a shape factor greater than 30.

29. (Previously Presented) The composition of Claim 16, wherein the predominantly rhombohedral precipitated calcium carbonate has a particle size distribution such that:

at least 93% by weight of the particles have an equivalent spherical diameter of less than 2 microns;

at least 86% by weight of the particles have an equivalent spherical diameter of less than 1 micron;

at least 22% by weight of the particles have an equivalent spherical diameter of less than 0.5 microns; and

from 5% to 25% by weight of the particles have an equivalent spherical diameter less than 0.25 microns.

30. (Previously Presented) The composition of Claim 15, wherein the precipitated calcium carbonate comprises a predominantly aragonitic precipitated calcium carbonate.

31. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a d_{50} of less than about 0.8 microns.

32. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a d_{50} of less than about 0.7 microns.

33. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a d_{50} of at least about 0.2 microns.

34. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a d_{50} ranging from 0.25 microns to about 0.45 microns.

35. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a particle size distribution such that at least about 90% by weight of the particles have an equivalent spherical diameter less than 2 microns.

36. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a particle size distribution such that at least about 75% by weight of the particles have an equivalent spherical diameter less than 1 micron.

37. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a particle size distribution such that at least about 60% by weight of the particles have an equivalent spherical diameter less than 0.5 microns.

38. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a particle size distribution ranging from 15% to 40% by weight of the particles have an equivalent spherical diameter less than 0.25 microns.

39. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a GE brightness of at least 90.

40. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a GE brightness of at least 92.

41. (Previously Presented) The composition of Claim 30, wherein the kaolin clay has a shape factor greater than 25.

42. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a particle size distribution such that:

at least 90% by weight of the particles have an equivalent spherical diameter of less than 2 microns;

at least 75% by weight of the particles have an equivalent spherical diameter of less than 1 micron;

at least 60% by weight of the particles have an equivalent spherical diameter of less than 0.5 microns; and

from 15% to 40% by weight of the particles have an equivalent spherical diameter less than 0.25 microns.

43. (Previously Presented) The composition of Claim 30, wherein the predominantly aragonitic precipitated calcium carbonate has a particle size distribution such that:

at least 95% by weight of the particles have an equivalent spherical diameter of less than 2 microns;

at least 82% by weight of the particles have an equivalent spherical diameter of less than 1 micron;

at least 66% by weight of the particles have an equivalent spherical diameter of less than 0.5 microns; and

from 23% to 33% by weight of the particles have an equivalent spherical diameter less than 0.25 microns.

44. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a shape factor greater than about 30.

45. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a shape factor greater than about 35.

46. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a shape factor greater than about 45.

47. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a d_{50} of less than about 0.5 microns.

48. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a d_{50} ranging from about 0.1 microns to about 0.5 microns.

49. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a d_{50} of greater than about 0.5 microns.

50. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a d_{50} ranging from about 0.5 microns to about 1.5 microns.

51. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a steepness ranging from about 25 to about 45.

52. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a steepness ranging from about 35 to about 45.

53. (Previously Presented) The composition of Claim 15, wherein the kaolin clay comprises at least 50% by weight kaolinite.

54. (Previously Presented) The composition of Claim 15, wherein the kaolin clay comprises greater than 75% by weight kaolinite.

55. (Previously Presented) The composition of Claim 15, wherein the kaolin clay comprises greater than 90% by weight kaolinite.

56. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a GE brightness of at least 85.

57. (Previously Presented) The composition of Claim 15, wherein the kaolin clay has a GE brightness of at least 90.

58. (Previously Presented) The composition of Claim 15, wherein the precipitated calcium carbonate comprises at least about 40% by weight relative to the total composition.

59. (Previously Presented) The composition of Claim 15, wherein the precipitated calcium carbonate comprises at least about 70% by weight relative to the total composition.

60. (Previously Presented) The composition of Claim 15, wherein the precipitated calcium carbonate comprises not more than about 75% by weight relative to the composition.

61. (Withdrawn) A coating composition for paper and other substrates, the composition comprising an aqueous suspension of a particulate pigment and a binder, wherein the particulate pigment comprises:

- (a) a precipitated calcium carbonate comprising particle shapes chosen from predominantly aragonitic, predominantly rhombohedral, and mixtures thereof, and
- (b) a kaolin clay with a shape factor greater than or equal to about 25 and a steepness greater than or equal to about 20.

62. (Withdrawn) The composition according to claim 61, wherein the binder comprises a modified starch.

63. (Withdrawn) The composition according to claim 61, further comprising at least one additional component chosen from: cross linkers; water retention aids; viscosity modifiers and thickeners; lubricity/calendering aids; dispersants; antifoamers/defoamers; dry and wet pick improvement additives; dry and wet rub improvement and/or abrasion resistance additives; gloss-ink hold-out additives; optical brightening agents (OBA) and/or fluorescent whitening agents (FWA); dyes; biocides/spoilage control agents; levelling and evening aids; grease and oil resistance additives; water resistance additives; additional pigments; and mixtures thereof.

64. (Withdrawn) The composition according to claim 63, consisting essentially of the aqueous suspension of the particulate pigment, the binder, and the at least one additional component, with less than about 10% by weight of the at least one additional component.

65. (Withdrawn) A method for preparing a coating composition comprising an aqueous suspension of a particulate pigment and a binder, wherein the particulate pigment comprises: a precipitated calcium carbonate comprising particle shapes chosen from predominantly aragonitic, predominantly rhombohedral, and mixtures thereof, and a kaolin clay with a shape factor greater than or equal to about 25 and a steepness greater than or equal to about 20, comprising:

mixing the particulate pigment and the binder into an aqueous liquid medium to prepare a suspension of the solid components therein.

66. (Withdrawn) A method for preparing a coated gloss paper comprising:

applying to the paper a composition comprising an aqueous suspension of a particulate pigment and a binder, wherein the particulate pigment comprises: a precipitated calcium carbonate comprising particle shapes chosen from predominantly aragonitic, predominantly rhombohedral, and mixtures thereof, and a kaolin clay with a shape factor greater than or equal to about 25 and a steepness greater than or equal to about 20 to coat the paper, and
calendering the paper to form a gloss coating thereon.

67. (Withdrawn) A paper coated with a gloss coating comprising a dry residue of a composition comprising an aqueous suspension of a particulate pigment and a binder, wherein the particulate pigment comprises: a precipitated calcium carbonate comprising particle shapes chosen from predominantly aragonitic, predominantly rhombohedral, and mixtures thereof, and a kaolin clay with a shape factor greater than or equal to about 25 and a steepness greater than or equal to about 20.

68. (Withdrawn) The paper according to claim 67, which is a coated mechanical paper.

69. (Withdrawn) The paper according to claim 67, which is a coated lightweight coated paper (LWC).

70. (New) A pigment composition comprising:
(a) a precipitated calcium carbonate comprising particle shapes chosen from predominantly aragonitic, predominantly rhombohedral, and mixtures thereof, and

(b) a kaolin clay with a shape factor greater than 25 and less than 30 and a steepness greater than or equal to about 20 and less than 30.